

REMARKS

Claims 1, 4, 6, 8, 10, 20, and 26 are amended, leaving claims 2, 3, 5, 7, 9, 11-19, 21-25, and 27-29 unchanged.

On page 2 of the Office Action and in the Notice of Draftsperson's Patent Drawing Review, the drawings are objected to as having poor line quality and numbering. Replacement drawing sheets 1-20 accompany this Amendment, and include amended FIGS. 1-20. FIGS. 1-20 are hereby amended to have uniformly thick, well-defined, and clean lines throughout, and include reference numbers that are plain and legible. Also, reference numbers 6 and 8 on originally-filed FIG. 2 are incorrectly reversed, and are corrected in replacement FIG. 2. Applicants respectfully request withdrawal of the objections to FIGS. 1-20.

On pages 2 and 3 of the Office Action, claims 1-29 are rejected under 35 U.S.C. §103(a) as being unpatentable over the prior art disclosed in FIGS. 1-10 of the present application in view of United States Patent Number 1,860,521 issued to Anderson.

Claim 1 is amended, and calls for:

A duct connector comprising:
a substantially rectangular passage disposed at a first end . . . ;
a substantially round passage disposed at a second end . . . ; and
a seamless intermediate passage extending between the rectangular passage and the round passage and including:
. . . substantially continuous curved convex transitional surfaces
seamlessly interconnecting each side wall to adjacent end walls.

Claim 4 is also amended, and calls for:

A duct connector comprising:
a substantially rectangular passage disposed at a first end . . . ;
a substantially round passage disposed at a second end . . . ; and
a seamless intermediate passage extending between the rectangular passage and the round passage and including:
. . . a single substantially smooth transitional surface seamlessly
interconnecting each side wall with an adjacent end wall.

Claim 6 is also amended, and calls for:

A duct connector comprising:
a substantially rectangular passage disposed at a first end . . . ;
a substantially round passage disposed at a second end . . . ; and
a seamless intermediate passage extending between the rectangular passage and the round passage and including:
. . . a non-faceted transitional surface seamlessly interconnecting each side wall to adjacent end walls to surround an axis through the duct connector.

Claim 8 is also amended, and calls for:

A duct connector comprising:
a substantially rectangular passage disposed at one end . . . ;
a substantially round passage disposed at the opposite end . . . ; and
a seamless intermediate passage extending between the rectangular passage and the round passage and including:
. . . curved transitional surfaces seamlessly interconnecting each side wall to an adjacent end wall, each transitional surface being tangential to an adjacent side wall and end wall.

Claim 10 is also amended, and calls for:

A duct connector, comprising:
a first end having a substantially rectangular passage;
a second end having a rotund passage . . . ; and
at least one wall defining a transitional passage between and connecting the substantially rectangular passage and the rotund passage, the transitional passage being seamless and substantially free from steps and sharp corners.

Claim 20 is also amended, and calls for:

A duct connector, comprising:
. . . one of the inlet and outlet having a substantially rectangular inner shape, another of the inlet and outlet having a rotund shape . . . ; and
a plurality of walls connecting the inlet and the outlet and circumscribing the fluid path to define a plurality of seamless interfaces between adjacent pairs of the plurality of walls, each seamless interface having a rounded shape and defining a smooth and seamless transitional surface between adjacent walls.

Claim 26 is also amended, and calls for:

A method of directing fluid flow from a rectangular inlet to a rotund outlet of a duct connector having a central axis, the method comprising:
... passing fluid flow past a plurality of walls surrounding the central axis and past a plurality of rounded transitional surfaces seamlessly connecting the plurality of walls

Each of claims 1, 4, 6, 8, 10, 20, and 26 calls for a duct connector or a method of directing fluid flow using a duct connector having an inlet and outlet (or ends), one of which is round or rotund, and one of which is rectangular or substantially rectangular. The duct connector claimed in each of amended claims 1, 4, 6, 8, and 10 also has a seamless intermediate or transitional passage. The duct connector claimed in amended claim 20 has a plurality of walls connecting the inlet and outlet and defining a plurality of seamless interfaces. Also, the method in amended claim 20 includes passing fluid past a plurality of transitional surfaces seamlessly connecting a plurality of walls.

In contrast, neither the prior art duct connector illustrated in FIGS. 1-10 of the present application, nor the pipe joint disclosed by Anderson teach, describe, or suggest a seamless intermediate or transitional passage, seamless interfaces defined by a plurality of walls circumscribing a fluid path and connecting an inlet and outlet, or rounded transitional surfaces surrounding a central axis and seamlessly connecting a plurality of walls. With reference to page 2, lines 6-11, the prior art duct connector illustrated in FIGS. 1-10 has a transitional passage with multiple walls defining steps, angled and multi-faceted surfaces, and sharp corners and breaks. As discussed in the June 29, 2004 interview with the undersigned, Anderson discloses a pipe joint having a reducer 10 with tacked and welded seams joining adjacent edges of triangular projections 20, 21. Accordingly, the reducer 10 has a number of welds at a number of seams running along the length of the reducer 10.

The Applicants therefore respectfully request withdrawal of the 35 U.S.C. §103(a) rejections of claims 1, 4, 6, 8, 10, 20, and 26. Claims 2-3, 5, 7, 9, 11-19, 21-25, and 27-29 each ultimately depend from amended claims 1, 4, 6, 8, 10, 20, and 26, respectively, and are

allowable based upon claims 1, 4, 6, 8, 10, 20, and 26 and upon other features and elements claimed in claims 2-3, 5, 7, 9, 11-19, 21-25, and 27-29 but not discussed herein. Accordingly, withdrawal of the 35 U.S.C. §103(a) rejections of claims 2-3, 5, 7, 9, 11-19, 21-25, and 27-29 is respectfully requested.

Accordingly, the Applicants respectfully submit that the present application is in condition for allowance. Entry of this response is therefore requested. The Examiner is invited to telephone the undersigned if any issues remain.

Respectfully submitted,



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